

with two pairs of strong presentellar dorso-centrals, the others almost indistinguishable. Abdomen narrowly ovate; fourth tergite with a stout bristle at apex on each side; basal sternite hairy, fourth with the hairs more dense at apex in centre than elsewhere. Fore tibia stout, unarmed at middle; mid-tibia with one posterior bristle at middle; mid-metatarsus long and slender; hind femur with one bristle near middle on antero-ventral surface and one pair near apex on postero-ventral; hind tibia nearly straight, with rather conspicuous setulose hairs on anterior side and shorter hairs ventrally on apical third, antero-dorsal bristle among the long hairs, postero-dorsal bristle small; hind metatarsus slender, with a fringe of erect curled fine hairs on anterior side, which are barely as long as the diameter of the segment; claws small. First posterior cell not narrowed apically.

*Female*.—Similar to the male. The only specimen before me lacks the hind legs, but I assume that, as in other species, these must differ from those of the male in having no setulose hairs and but the two bristles, and the tarsi will have the normal form and hairing.

*Type*, male, and allotype, Nilaveli, Ceylon, 16. & 11. xi. 1890. Paratypes, one male, Kanthalai, Ceylon, 11. iii. 1892; one male, Maighini, Ceylon, 17. xi. 1890 (*J. W. Yerbury*).

*Key to Genera of Lispine.*

- 1. Cheek with a strong bristle near lower anterior angle of eye..... *Chatolispa*, Malloch.
- Cheek without such bristle..... 2.
- 2. Thorax with only one pair of dorso-centrals; fore femur with only one or two short bristles near apex on postero-ventral surface..... *Xenolispa*, Malloch.
- Thorax with at least two distinct pairs of dorso-centrals, and a series of bristles on postero-ventral surface of fore femur..... *Lispa*, Latreille.

XLIV.—*On Mammals from the Yunnan Highlands collected by Mr. George Forrest and presented to the British Museum by Col. Stephenson R. Clarke, D.S.O.* By OLDFIELD THOMAS.

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THE National Museum owes to the generosity of Col. Stephenson R. Clarke the fine collection of mamma's found by Mr. George Forrest in the high mountain area of Northern Yunnan and North-Eastern Burma, about N. lat.

27°-28°, in the region where the upper waters of the Irrawaddy, the Salween, the Mekong, and the Yang-tse approximate to each other and form a remarkable district of alternating mountains and valleys perhaps unequalled for diversity of surface in any part of the world. Mr. Forrest has been collecting plants in this area for some time, and in 1918 had obtained a few mammals, among which were the two new forms of *Tamioys* described by me in 1920\*. Col. Clarke was then good enough to influence Mr. Forrest to turn his attention to small mammals, and in the collection of these, as of birds, he has proved to have great abilities, so that the present set is one of the most interesting collections that the Museum has received for many years. Geographically it fills a very important lacuna between the collections made in Northern Burma on behalf of the Bombay Natural History Society and those obtained by Mr. Malcolm Anderson in Sze-chwan when carrying out the Duke of Bedford's exploration of Eastern Asia.

Isolated collections have also been made in this area by Mr. E. B. Howell and Mr. F. Kingdon Ward, and to them we owe the first discovery of several of the smaller forms now sent by Mr. Forrest.

The whole collection consists of nearly 250 specimens, of which about 100 are voles, and have been reserved for a separate paper by my colleague Mr. Hinton. The remainder belong to 32 species, including 7 now described as new.

Of these novelties, one is an exceptionally beautiful Flying-squirrel, which I have named in honour of the donor, and another forms a new genus of Sciuridæ, and is therefore of great zoological interest. The specimens of a new species of a Uropsiline Insectivore are also especially welcome.

1. *Barbastella darjelingensis*, Hodgs.

♂. 470. Wei-Hsé Valley, 27° N. 7000-8000'.

2. *Tadarida teniotis cavata*, subsp. n.

♂. 403. Mekong Valley, 28° 20'. 7000'. 29th September, 1921. B.M. no. 22. 9. 1. 2. *Type*.

Quite similar in size and general characters to true *teniotis*, but colour much darker. Upper surface uniform dark "mummy-brown," the extreme bases of the hairs only whitish. In Portuguese and Egyptian specimens the general colour is more or less drab. Under surface very slightly paler.

Skull and teeth as in *teniotis*.

\* Ann. & Mag. Nat. Hist. (9) v. p. 304 (1920).

Dimensions of the type:—

Forearm 60 mm.

Head and body 89; tail 55. Metacarpus of third digit 63, of fifth 34.

Skull: greatest length 24·8; basi-sinual length 19·7.

Although in all essential characters this bat appears to be identical with the S.-European *T. teniotis*, the difference in its colour is sufficiently marked to render a subspecific name advisable for it, especially when the immense difference in locality is considered.

### 3. *Tupaia belangeri chinensis*, And.

♂. 452, 453, 484, 534, 568, 570; ♀. 415. Li-kiang Range, 27° 30'. 9000–11,000'.

♂. 626. Hills east of Li-kiang Valley, 27°. 10,000'.

♂. 402. Mekong–Salween divide, 27° 30'. 9000–10,000'.

♀. 30. Mekong Valley, 27° 30'. 5000'.

Modern specimens from Pensee, Kakhyen Hills, the type-locality of *chinensis*, would be of service in identifying Anderson's species with certainty; but there is little doubt that the present specimens are referable to it.

### 4. *Scaptonyx fuscicaudatus affinis*, Thos.

♂. 33. Mekong–Salween divide, 28° N. 7000–8000'.

Practically a topotype of the subspecies, and only the second specimen of this remarkable genus that the Museum has received.

### 5. *Nasillus investigator*, sp. n.

♂. 185; ♀. 182, 183, 184, 186, 312. Kiu-kiang–Salween divide, 28° N. 11,000'.

♀. 217. Salween–Mekong divide, 28° N. 14,000'.

Externally quite like *N. gracilis*—indeed, all the members of the three genera *Uropsilus*, *Rhynchonax*, and *Nasillus* are hardly distinguishable from each other.

Essential characters of the dentition as in *N. gracilis*, the formula the same in all the specimens. Skull, however, conspicuously larger, both longer and, especially, broader, the brain-case much wider.

Dimensions of the type (measured in the flesh):—

Head and body 88 mm.; tail 62; hind foot 14; ear 10.

Skull: greatest length 21·4; condylo-basal length 20;

zygomatic breadth 10·3; interorbital breadth 5·2; breadth across brain-case 11; length of upper tooth-series 9·1.

*Hab.* as above. Type from the Kiu-kiang-Salween divide at 28° N. Alt. 11,000'.

*Type.* Immature female (the milk-teeth still in place, but the skull quite of full size). B.M. no. 22.9.1.16. Original number 184. Collected 24th July, 1921.

Although not of the showy character of the new *Petaurista* and the new genus of squirrels, this little animal is of very special interest, as it confirms the division of the members of the Uropsilinae into three genera—a division about which I felt most diffident. The identity of the external characters and of the skulls, even when combined with the differences in the dental formulæ, made the division one of some doubt, for it seemed possible that the formulæ might be unusually variable. This series, therefore, all absolutely agreeing in formula with *Nasillus*—a genus of which I only had one specimen before,—is of much value as confirming the characters used.

As a species *N. investigator* is readily distinguishable from *N. gracilis* by its larger skull. The locality of the latter is in a different faunal area, much further eastwards, and at an altitude of only 4000'.

#### 6. *Sorex bedfordiae*, Thos.

- ♂. 150, 159. Mekong Valley, 28° N. 9000'.  
 ♂. 202, 345; ♀. 275. Mekong-Salween divide, 28° 20'.  
 12,000-14,000'.  
 ♀. 187. Kiu-kiang-Salween divide, 28° N. 11,000'.

The Kiu-kiang-Salween divide locality forms the first record of the striped shrew in British territory.

#### 7. *Blarinella wardi*, Thos.

- ♂. 216. Mekong-Salween divide, 28° N. 14,500'.  
 ♂. 320. Kiu-kiang-Salween divide, 28° N. 12,000'.

#### 8. *Crocidura* sp.

- ♂. 276. Mekong-Salween divide, 28° 20' N. 12,000'.  
 ♀. 408, 569. Li-kiang Range, 27° 40'. 9000-13,000'.  
*C. russula* group.

#### 9. *Paguma larvata yunalis*, Thos.

- ♀. 537 (young). Li-kiang Range, 27° 30' N. 11,000-12,000'.

10. *Charronia flavigula*, Bodd.

♀. 414. Li-kiang Range, 27° 40'. 10,000-11,000'.

11. *Lutreola sibirica moupinensis*, M.-Edw.

♂. 167, 223. Mekong Valley, 28° N. 7000'.

♀. 454. Li-kiang Range, 27° 30'. 12,000-14,000'.

It is impossible at present to express a definite opinion as to the position of these animals. Milne-Edwards described a number of Chinese species without any consideration of the wide differences that occur between the two sexes and the summer and winter pelages. It is, however, probable that his *moupinensis* is the same animal as those now obtained by Mr. Forrest, and I provisionally use that name.

There is some variation in the degree of blackening at the end of the tail, and it seems that my *Mustela hamptoni*, from Mt. Imaw Bum, should rather have been compared with the present animal than with *M. subhemachalana* of Nepal.

12. *Arctonyx obscurus*, M.-E lw.

♀. 538. Li-kiang Range, 27° 30' N. 10,000-12,000'.

In determining this badger my attention has been drawn to a specimen from the extreme east of China which has hitherto been referred to *A. obscurus*, but which appears to be worthy of subspecific distinction.

*Arctonyx obscurus incultus*, subsp. n.

Fur much poorer, thinner, and harsher than in *obscurus*. General colour dull whitish washed with black, the prominent whitish tips of the posterior dorsal fur found in *obscurus* almost entirely absent. Under surface very thinly haired, dull whitish washed with black. Crown and nape without a white central streak. Markings of head about as in *obscurus*.

Skull with comparatively broad muzzle, and with the posterior bony palate extremely inflated on each side, far more so than in any of the several West China specimens, from Ichang and westwards, in the Museum collection.

Dimensions (from skin) :—

Head and body (about) 700 mm.; tail 170; hind foot 89.

Skull: greatest length 134; condylo-basal length 128; zygomatic breadth 80; breadth of muzzle across roots of canines 28.5; interorbital breadth 33.3; breadth of posterior palate across inflations 27.7; longest oblique diameter of m<sup>1</sup> 15.

*Hab.* An-hwei, W. China. Type from Chin-teh (Tsing-tō of Stielcr), about 150 km. W. of Hang-chow.

*Type.* Old male. B.M. no. 2. 6. 10. 35. Collected May 1896, and presented by F. W. Styan, Esq.

This animal has the characteristics of a low hot-country form, as compared with the comparatively rich-furred true *obscurus*. The unusual inflation of the posterior palate is also noteworthy.

13. *Lutra lutra nair*, F. Cuv.

♀. 246. Mekong Valley, 28° N.

14. *Ailurus styani*, Thos.

♀. 627, 1234. Li-kiang Range, 27° 30' N. 11,000–12,000'.

These splendid specimens so confirm the characters, especially those of the skull, described when *A. fulgens styani* was founded, that I should now consider the Sze-chwan and Yunnan Panda as a different species from that of the Himalayas.

In coloration there is considerable variation between different individuals, 627 having a brilliantly black-ringed tail, while in 1234 the rings are no more prominent than they are in average *fulgens*. Both the Yunnan specimens are heavily blackened behind the shoulders and darkened across the withers, but the two Sze-chwan examples differ widely from each other in these respects. The face-pattern is also very variable.

15. *P. turista clarkei*, sp. n.

♂. 103, 227; ♀. 104, 105, 156, 160. Mekong Valley at 28° N. 9000–10,000'.

A beautiful grey-headed species with prominent buffy patches behind the ears.

Size about as in *P. marica* and other members of that group of the genus, smaller than in *nitida* and its allies. General colour of body above mixed blackish and buffy, the hairs blackish slaty for the greater part of their length, their tips buffy; laterally these tips become deeper-coloured, ochraceous on the top of the parachute. Under surface buffy whitish, gradually becoming rich ochraceous laterally, the throat whitish without buffy suffusion, the inguinal region greyish white with slaty bases to the hairs. Head contrasted dark grey—nearest to Ridgway's "deep quaker-drab,"—the face, crown to nape, and cheeks all of this colour; interramia

whitish and point of chin blackish. Ears large, thinly haired, almost naked except along their anterior edges, black, a large and prominent bright ochraceous patch on their posterior bases and behind them; this patch sometimes duller and mixed with brown. Upper surface of hands and feet, as also the margins of the parachute, anteriorly and posteriorly bright ochraceous buffy, the actual edge of the parachute, however, whitish. Tail subcylindrical, mixed buffy and black, the hairs black at base, then buffy, with black subterminal bands and buffy ends; tip of tail black.

Skull without noticeable peculiarities, rather longer than in *marica*; postorbital processes well developed; bullæ large and well inflated.

Dimensions of the type:—

Head and body 320 mm.; tail 370; hind foot 65; ear 50.

Skull: greatest length 63; condylo-incisive length 57; zygomatic breadth 40; nasals  $18 \times 11$ ; palatilar length 28.7; length of bulla 12.8; upper tooth-series exclusive of  $p^3$  13.5.

*Hab.* as above.

*Type.* Adult female. B.M. no. 22. 9. 1. 44. Original number 156. Collected 26th July, 1921.

This beautiful grey-headed Flying-squirrel is so different from every described species that it is difficult to say with which it should be compared. It belongs to a small group of species occurring in the Yunnan-Burma-Siam region, all of which are brightly coloured and of smaller size than the better-known large species of true *Petaurista*. None of these, however, shows any resemblance to *P. clarkei* in its buffy colour, grey head, and ochraceous ear-patches.

I have great pleasure in naming this very handsome animal after Col. Stephenson Clarke, to whose generosity the National Museum owes the present valuable and extensive accession to its mammal collections.

“Shot in pine-forest.”—*G. F.*

#### 16. *Trogopterus mordax*, Thos.

♀. 228 (immature). Mekong Valley, on 28°. 9000'.

Adult examples of *Trogopterus* seem difficult to obtain, as a considerable proportion of the available specimens of the genus are immature.

#### 17. *Callosciurus erythraeus michianus*, Rob. & Wr.

♂. 485, 628; ♀. 413. Li-kiang Range, 27° 30'. 8000–11,000'.

♂. 332. Mekong-Salween divide, 28° 20'. 7000-8000'.

♂. 416. Mekong Valley, 27° 30'. 7000'.

Of value as indicating the range of this form, whose locality—"Mee-Chee"—had not, I think, been definitely identified. Very uniform in colour as a whole, though one specimen has a marked tendency to the yellow sternal region said to be characteristic of *hamobaphes*, Glover Allen, of S. E. Yunnan.

18. *Rupestes forresti*, gen. et sp. n.

♂. 26; ♀. 25, 27. Mekong-Yangtze divide on 27° 20' N. 7000-9000'.

RUPESTES, gen. nov.

Related in essential skull-characters to *Sciurotamias*, but more like *Menetes* in general appearance externally. Body with a pair of whitish stripes. Anterior claws elongated, rather blunt. Soles naked except posteriorly, a long additional sole-pad (as compared with *Sciurotamias*) halfway between the heel and the digital pad at the base of the hallux. Tail distichous. Three pairs of mammæ.

Skull with very much the peculiar shape of that of *Sciurotamias*, being of the same long, low, subcylindrical form, which is more or less characteristic of ground-squirrels. Muzzle long. Postorbital processes not greatly developed.

Small anterior premolar completely absent, both in milk and permanent dentitions. Structure of cheek-teeth about as in *Sciurotamias*, wholly unlike that in *Menetes*.

Genotype, *Rupestes forresti*, sp. n.

This new genus is a most interesting discovery, as it is markedly different from any hitherto described. Its dental formula is at once distinctive; the structure of its teeth and the shape of the skull separate it widely from *Menetes*, and bring it nearer to the otherwise dissimilar *Sciurotamias*. Its long and rather blunt anterior claws are what one expects to find in an animal inhabiting rocky cliffs, and readily distinguish it from *Sciurotamias*, which also has much more hairy soles and is without the long intermediate sole-pad of *Rupestes*.

Mr. Forrest is to be congratulated on his discovery of so striking a new animal, and I have much pleasure in connecting his name with it.



*Rupestes forresti*, sp. n.

Size about as in *Menetes berdmorei*. General colour of upper surface dark grizzled greyish brown—the mixture rather darker than “chætura drab”; hairs ringed with black and buffy. On each side a dull and not very conspicuous whitish line from the shoulder to the hip, similar in length and position to that found in *Menetes berdmorei*, but not so conspicuous. The dark line below the white about matching the back. Below this, again, the flanks are broadly washed with ochraceous, which passes on to the belly, where the hairs are slaty basally and ochraceous terminally. A prominent contrasted patch of wholly white hairs from chin down neck to chest. Muzzle grizzled buffy and black of a warmer tone than the back; eyelids strong buffy; cheeks, sides of head and neck, and outer base of ear deep ochraceous, without any trace of a darker cheek-line such as is found in *Sciurotamias*. Ears buffy brown, with a darker proectote. Hands grizzled buffy and brown; feet similar but darker, sometimes becoming black terminally. Tail of medium length and bushiness, distichous, the hairs ringed buffy and black, with whitish tips.

Dimensions of the type (measured by collector):—

Head and body 224 mm.; tail 166; hind foot 54; ear 27.

Skull: greatest length 60.2; zygomatic breadth 31; nasals 19.4 × 8; interorbital breadth 14; tip to tip of post-orbital processes 19.5; height of crown from alveolus of  $m^3$  14.2; palatilar length 26; length of bulla 11.5; upper cheek-teeth 8.8.

*Hab.* as above.

*Type.* Old female. B.M. no. 22. 9. 1. 54. Original number 27. Collected 5th June, 1921.

“Shot on scrub-clad cliffs.”—*G. F.*

This squirrel represents a genus quite distinct from any hitherto known, and forms a most interesting discovery. In general appearance the animal is like a *Menetes*, its size, dark colour, and the whitish lateral line giving it a superficial resemblance to the members of that genus.

19. *Tamiops clarkei*, Thos.

♂. 28; ♀. 29. Mekong Valley, at 27° 30' N. 5000'. 11th June, 1921.

These additional specimens of this species—the finest of the

genus—are most welcome, especially as they are killed at a different season to the previous specimens, and thus help towards a knowledge of its seasonal variation.

20. *Tamiops maritimus forresti*, Thos.

♂. 132, 535, 623; ♀. 131, 536, 624. Li-kiang Range, 27° 30'. 10,000–11,000'.

Three of these specimens were killed in December, and fully bear out the suggestion made on the description of the subspecies that it would probably be without dark subdorsal stripes in the winter. We are therefore now able to trace the seasonal changes of Forrest's *Tamiops* at the principal seasons.

21. *Dremomys pernyi pernyi*, M.-Edw.

♂. 32, 83, 224; ♀. 34. Mekong–Salween divide at 28°. 7000–10,000'.

These specimens of the typical *pernyi*, agreeing as they do with those sent by the Paris Museum as representing that animal, the form fixed on as being true *pernyi* in my paper of 1916\*, are of great value, as we had hitherto scarcely any examples belonging without question to it.

In determining them and the succeeding specimens of *Dremomys* I have been able to re-examine all our western examples of *pernyi*—from Burma, Yunnan, and Sze-chwan,—and find that they may be divided into seven races, as follows:—

- A. Dark-coloured, saturate, the end of the tail more or less blackened.
- a. No trace of a darker median dorsal line. (E. of Salween.) . . . . . *pernyi*, M.-Edw.
  - b. A slight but constant indication of a dark line on the fore-back. (W. of Salween.)
  - a<sup>2</sup>. Size medium—skull less than 55 mm.
  - a<sup>3</sup>. Skull about 53 mm.; tooth-row 8.1. (Tengyueh.) . . . . . *howelli*, subsp. n.
  - b<sup>3</sup>. Rather smaller—skull 50 mm.; tooth-row 7.7. (Chin Hills.) . . . . . *mentosus*, subsp. n.
  - b<sup>2</sup>. Size larger—skull 57 mm. (Mt. Imaw Bum.) . . . . . *imus*, subsp. n.
- B. Light-coloured, grey or pale olivaceous. End of tail not blackened.
- c. Size larger, skull over 50 mm.; colour greyer. (Upper Mekong and Sze-chwan.) . . . . . *griselda*, Thos.

\* Ann. & Mag. Nat. Hist. (8) xvii. p. 391.

- d. Size smaller—skull about 49 mm.; colour olivaceous.
- e<sup>2</sup>. Colour browner olivaceous. Fur shorter and harsher. (S. Yunnan.) . . . . . *flavior*, G. All.
- d<sup>2</sup>. Colour more buffy olivaceous. Fur longer and softer. (N.W. Yunnan.) . . . . . *lichiensis*, subsp. n.

*Dremomys pernyi howelli*, subsp. n.

Colour throughout like that of true *pernyi*, or very slightly more yellowish olivaceous, but on the fore-back in every specimen there is an almost imperceptible blackish dorsal line from 1 to 2 inches in length. Under surface as in *pernyi*, the throat whitish or slightly buffy, the front aspect of the lower legs dull whitish or more or less washed with reddish. Tail as in *pernyi*.

Skull about 53 mm. in length.

Dimensions of type (measured by collector):—

Head and body 199 mm.; tail 138; hind foot 46; ear 22.

Skull: greatest length 53·5; condylo-incisive length 45·5; upper tooth-series exclusive of  $p^3$  8·1.

*Hab.* On Tai-Ping-Ho, Upper Irrawaddy, in neighbourhood of Tengyueh. Type from Ma Chang Kai, about 25 miles S.W. of Tengyueh. 6500'.

*Type.* Old male. B.M. no. 12.8.26.2. Original number 228. Collected 4th June, 1912, and presented by E. B. Howell, Esq. Nine specimens.

Slight as is the difference between this squirrel and true *pernyi*, it runs through the series of seven specimens of one and nine of the other, and the localities are quite sufficiently far apart to make a real distinction likely, so that the Tengyueh form ought evidently to have a local name.

I have much pleasure in naming this squirrel after Mr. Howell, its discoverer, to whom the National Museum owes a considerable number of Chinese mammals, including the original series of *Microtus calamorum*.

*Dremomys pernyi mentosus*, subsp. n.

Like *D. p. howelli*, but smaller and with shorter tooth-row.

General colour as in the paler and more yellowish examples of *howelli*, an almost imperceptible dark dorsal line similarly present. Details of colour as in that race. Inguinal region and front of legs washed with dull buffy.

Skull as in *howelli*, but smaller; the tooth-row rather

shorter, the measurement being quite constant in the series of *howelli*.

Dimensions of the type (measured by the collector):—

Head and body 184 mm. ; tail 111 ; hind foot 42 ; ear 22.

Skull : greatest length 50·7 : upper tooth-row exclusive of  $p^3$  7·7.

*Hab.* Chin Hills ; type from 6 miles W. of Kindat. Alt. 5000'.

*Type.* Adult female. B.M. no. 16. 3. 26. 40. Original number 446. Collected 13th May, 1915, by J. M. D. Mackenzie, Esq. ; presented by him to the Bombay Natural History Society, and given by the latter to the National Collection. One specimen.

The locality of this squirrel—west of the Chindwin—is separated by a wide area of comparatively low-lying country from that of its near ally *D. p. howelli*, and one would have expected to find more differences than the slight reduction in size, which is, however, sufficient for diagnostic purposes. All the squirrels of this group are highland dwellers, and it is therefore probable that none occur in the Chindwin-Irrawaddy area between the two forms.

The occurrence of this squirrel on the Chindwin was first recorded in 1916\*.

*Dremomys pernyi imus*, subsp. n.

Like *D. p. howelli* in all respects, but decidedly larger. Dark dorsal line just perceptible. Front of legs washed with dull buffy.

Dimensions of the type :—

Head and body (c.) 220 mm. ; tail 170 ; hind foot 48·5 ; ear 25.

Skull : greatest length 57·5 ; condylo-incisive length 49 ; upper cheek-teeth exclusive of  $p^3$  8·3.

*Hab.* Mount Inaw Bum ; type from the west flank ; lat. 26° 10', long. 98° 30'. Alt. 7000'.

*Type.* Old male. B.M. no. 20. 8. 7. 7. Original number 19. Collected 21st October, 1919, by F. Kingdon Ward. Presented by the Bombay Natural History Society.

A large mountain race of *D. p. howelli*, which is found on the same river system further to the south.

\* J. Bomb. Soc. xxiv. p. 418.

22. *Dremomys pernyi griselda*, Thos.

♂. 107; ♀. 106. Mekong Valley, 27° 30'. 6000-8000'.

♂. 280, 281, 282, 283; ♀. 284. Mekong-Salween divide, 28° 20'. 9000-10,000'.

23. *Dremomys pernyi lichiensis*, subsp. n.

♂. 410, 539, 607; ♀. 411, 412, 486, 533. Li-kiang Range, 29° 30'. 10,000'.

♂. 625. Hills east of Li-Kiang Valley, 27°. 10,000'.

Nearly allied to *D. p. flavior* of S. Yunnan (Möng-tze), with which it agrees in size; but the general colour is a more yellowish, less brownish, olivaceous, the face is rather more buffy, and the fur is decidedly longer and less harsh. In summer specimens the fur of the back is about 14 as compared with 9 mm. in length, and in winter 15 as compared with 11 mm., and there is a marked difference in its texture. Under surface broadly washed with whitish, the throat and inguinal region more buffy; but sometimes the chest is more or less buffy.

Dimensions of the type:—

Head and body 175 mm.; tail 160; hind foot 45.

Skull: greatest length 49; condylo-incisive length 42.6; upper tooth-series exclusive of  $p^3$  7.9.

*Hab.* as above. Type from the eastern flank of the Li-kiang Range, at 27° 20' N. 10,000-12,000'.

*Type.* Adult male. B.M. no. 20. 1. 16. 2. Collected July 1918.

The winter specimens now obtained by Mr. Forrest fully confirm the difference shown by his previously-sent summer examples, as compared with the good series of typical *flavior*, both summer and winter, that was received from Orie in 1912.

24. *Marmota robusta*, M.-Edw.

♂. 398, 399, 400, 401. Mountains east of A-tun-tze, Mekong-Yangtze divide, 28° 35' N. 14,000-15,000'.

Adult and three young.

25. *Rattus andersoni*, Thos.

♂. 80; ♀. 77, 79, 85, 86. Mekong Valley, 28° N. 6000-7000'.

♂. 127. Mekong-Yangtze divide, 27° 30' N. 9000'.

The type-locality of this fine long-tailed rat is Mount Omi-san, Sze-chwan.

26. *Rattus confucianus*, M.-Edw.

♂. 76, 81, 82; ♀. 75, 87. Mekong Valley, 28° N. 7000'.

♂. 35, 113; ♀. 116. Mekong-Yangtze divide, 27° 30' N. 8000-9000'.

♂. 405, 1237. Li-kiang Range, 27° 30' N. 11,000-12,000'.

27. *Rattus eha ninus*, subsp. n.

♀. 95, 163. Mekong Valley, 28° N. 8000-9000'.

♂. 315, 317; ♀. 309, 311. Kiu-kiang-Salween divide, 28° N. 11,000'.

Duller coloured than true *eha* of Sikkim, the general tone less rufous and the face-markings almost obsolete; the black eye-rings and greyish-white whisker-patches, so well-defined in *eha*, scarcely perceptible. Sides less vivid ochraceous. Ears brown. Feet brown proximally, white distally. Tail long, thinly haired, faintly pencilled distally, brown above, whitish below, the contrast less marked than in *eha*.

Skull rather variable, but on the average like that of *eha*, with the exception that the interorbital space is narrower and more sharply ridged.

Dimensions of the type (measured in flesh):—

Head and body 127 mm.; tail 144 (imperfect, other specimens up to 180); hind foot 27; ear 20.

Skull: greatest length 32; condylo-incisive length 28.3; nasals 11.3; interorbital breadth 3.7; breadth of brain-case 13.5; zygomatic plate 2.5; palatilar length 13.2; palatal foramina 6.7; upper molar series (worn) 4.6.

*Hab.* as above. Type from the Kiu-kiang-Salween divide.

*Type.* Adult female. B.M. no. 22.9.1.107. Original number 311. Collected 19th August, 1921.

The rat obtained by Mr. Kingdon Ward on Mount Imaw Bum, and referred to *R. eha* in my list of his collection, is also a good representative example of *R. e. ninus*, which differs from true *eha* by its duller and less contrasted coloration and narrower interorbital region.

28. *Apodemus ilex*, sp. n.

♂. 176, 177, 314; ♀. 169. Kiu-kiang-Salween divide, 28° N. 8000-12,000'.

♂. 109; ♀. 39, 137. Mekong-Yangtze divide, 27° 30' N. 7000-9000'.

♂. 123, 200, 203; ♀. 31, 201, 214, 272, 331, 341. Mekong-Salween divide, 28° N. 9000-14,000'.

♂. 71, 165; ♀. 59, 73, 74. Mekong Valley, 28°. 7000'.

A brown *Apodemus* with 1-2=6 mammæ, as in *A. sylvaticus*.

Size small, form comparatively slender. Fur soft, spineless, hairs of back about 7 mm. in length. General colour above dull fulvous brown, rather more fulvous than "Saccardo's umber," lined with blackish on the dorsal area, clearer on the sides. Under surface soiled grey, the hairs slaty at base, broadly washed terminally with greyish white; line of demarcation well marked. Ears large, their proectote blackish. Hands and feet slender, white. Tail rather longer than head and body, finely ringed, almost naked, greyish brown above, white below proximally, more greyish terminally, but the upper and lower colours not sharply contrasted. Mammæ 1-2=6.

Skull comparatively broad, smoothly rounded, with scarcely any trace of supraorbital ridges. Palatal foramina not reaching to the level of  $m^1$ .

Teeth small and delicate.

Dimensions of the type:—

Head and body 97 mm.; tail 105; hind foot 22; ear 15.

Skull: greatest length 26.2; condylo-incisive length 23.3; zygomatic breadth 13.5; nasals 10; interorbital breadth 4.7; breadth of brain-case 12.3; palatal foramina 5.1; upper molar series 5.

*Hab.* as above. Type from the Salween-Mekong divide at 28° 20' N. Alt. 13,000-14,000'.

*Type.* Adult female. B.M. no. 22. 9. 1. 122. Original number 334. Collected 18th September, 1921.

So far as I am aware, no *Apodemus* with only 1-2=6 mammæ has been described from this part of Asia, that number being characteristic of the *A. sylvaticus* group, to which no doubt *A. iler* belongs. *A. s. draco*, B.-H., has 2-2=8 mammæ, as have all the other Chinese members of the genus, with the one exception of the dark-coloured Formosan *A. semotus*, which also has 1-2=6\*.

### 29. *Apodemus speciosus latronum*, Thos.

♂. 338; ♀. 277, 278, 279, 333, 343. Mekong-Salween divide, 28° 90'. 9000'.

2-2=8 mammæ; ears large; tail fairly long.

\* Cf. Ann. & Mag. N. H. (8) i. p. 448 (1905).

30. *Apodemus chevrieri*, M.-Edw.

- ♀. 308. Kiu-kiang-Salween divide, 28° N. 11,000'.  
 ♀. 406, 407, 1235. Li-kiang Range, 27° 30' N.  
 10,000-12,000'.

The short-tailed, short-eared *Apodemus* with 2-2=8 mammae.

The first locality mentioned above brings this type of mouse within the British area, all previous records having been Chinese.

31-37. *MICROTINÆ*.

The considerable number of voles obtained by Mr. Forrest—about 100 specimens—form the subject of a succeeding paper by Mr. Martin Hinton. They appear to belong to three genera and six species, of which several are new.

38. *Ochotona roylei chinensis*, Thos.

- ♂. 299, 300, 328; ♀. 325, 326, 327. Mekong-Yangtze divide, 28° 28'. 12,000-14,000'.  
 ♀. 151, 158. Mekong Valley, 28°. 11,000-12,000'.  
 ♀. 209. Mekong-Salween divide, 28°. 14,000'.

A provisional determination, which cannot be checked until specimens are obtained either of the Yunnan form in winter or of *Ta-chien-lu chinensis* in summer, all Mr. Forrest's specimens having been killed in the latter season, while the type is in winter fur. An indication of a fulvous mark is, however, appearing on the latter's nape, agreeing in colour with the well-developed mantle of the Yunnan series, so that I have little doubt that the determination is correct.

39. *Ochotona thibetana*, M.-Edw.

- ♂. 1. Sung-kwei Range, N.W. Yunnan, 26° 24' N. 10,000'.  
 ♀. 172. Kiu-kiang-Salween divide, 28° N. 11,000'.  
 ♂. 110, 121, 141; ♀. 111, 128. Mekong-Yangtze divide, 27° 30'. 11,000-13,000'.  
 ♂. 161; ♀. 153. Mekong Valley, 28°. 11,000-12,000'.  
 ♀. 198, 210. Mekong-Salween divide, 28°. 13,500-14,000'.

These specimens have smaller bullæ than the typical *thibetana*, and confirm my suggestion that the Sikkim form—*sikimaria*—will probably prove to grade into that animal.